

Name: _____

Date: _____

Evaluating a Theory

A Theory in science, unlike many other areas, must be a coherent explanation using observations, laws, and hypotheses drawn together into a conclusion, rather than a “hunch”.

Using the information presented in this case study, which explains the formation of the first eukaryotic cell in evolution; evaluate how strong of a scientific theory endosymbiosis is by answering the following questions.

Answer the following questions in complete sentences on a SEPARATE piece of lined paper

1. What observations were made to determine that eukaryotic cells first formed through endosymbiosis? *What could they actually see?*
2. What inferences were made? *What predictions were made based on the observations?*
3. What hypotheses, if any, were combined to form this theory?
4. What is the strongest aspect of the argument for this theory?
5. What is the weakest aspect of the argument for this theory? *What does the case study fail to discuss?*
6. Based on your answers to the previous questions, how complete of a theory do you think endosymbiosis is, as it relates to the formation of the first eukaryotic cell? Explain your reasoning.